

1 CLAIMS:

2 1. A method of forming a co-axial line comprising:
3 providing a substrate having an outer surface;
4 forming a conductive line at least a portion of which is
5 elevationally spaced from the outer surface;
6 forming a dielectric polymer layer over and surrounding at least
7 a portion of the conductive line where it is spaced from the outer
8 surface; and
9 forming an outer conductive sheath over the dielectric polymer
10 layer.

11
12 2. The method of claim 1, wherein the forming of the outer
13 conductive sheath comprises chemical vapor depositing a metal-comprising
14 layer of material over the dielectric polymer layer.

15
16 3. The method of claim 2, wherein the metal-comprising layer
17 includes aluminum.

18
19 4. The method of claim 1, wherein the dielectric polymer layer
20 comprises Parylene.
21
22
23
24

03887049.062101
TOT290.642889

1 5. The method of claim 1, wherein the forming of the
2 conductive line comprises:

3 forming a conductive line pattern over the substrate outer surface;

4 forming conductive material over and within the conductive line
5 pattern; and

6 removing material of the conductive line pattern from elevationally
7 below the conductive material.

8
9 6. The method of claim 5, wherein the forming of the
10 conductive material comprises:

11 forming a conductive film layer over the conductive line pattern;

12 and

13 electroplating conductive material over the conductive film layer.

14
15 7. The method of claim 5, wherein the forming of the
16 conductive material comprises electroless plating a conductive material
17 over the conductive line pattern.

18
19 8. A method of forming a conductive line comprising:

20 forming conductive material within a line pattern within a layer
21 of photoresist and over a substrate outer surface; and

22 removing the layer of photoresist and suspending at least a
23 portion of the conductive material in the line pattern above the
24 substrate outer surface.

09887049.063101
TOT290.54028860

1 9. The method of claim 8, wherein the forming of the
2 conductive material comprises electroplating a conductive material over
3 the layer of photoresist.

4
5 10. The method of claim 8, wherein the forming of the
6 conductive material comprises electroless plating a conductive material
7 over the layer of photoresist.

8
9 11. The method of claim 8, wherein the suspending of the
10 conductive material comprises prior to the forming of the conductive
11 material, forming at least one terminal member over the substrate outer
12 surface, the conductive material being formed over and support by the
13 terminal member.

14
15 12. A method of forming a co-axial line comprising:
16 forming a masking material layer over a substrate;
17 patterning the masking material layer to form at least one
18 conductive line pattern;

19 forming an inner conductive layer within the at least one
20 conductive line pattern;

21 vapor depositing a layer comprising a polymer dielectric material
22 over at least some of the inner conductive layer; and

23 forming an outer conductive layer over the polymer dielectric
24 material.

1 18. The method of claim 16 further comprising:
2 after forming the inner conductive layer, planarizing the inner
3 conductive layer relative to the masking material layer; and
4 prior to vapor depositing the polymer dielectric material, removing
5 at least some of the masking material layer.

6
7 19. A method of forming a co-axial line comprising:
8 forming a pair of upstanding, spaced-apart conductive terminal
9 members over a substrate;
10 forming a co-axial inner conductive line component which extends
11 between and electrically connects with the terminal members;
12 surrounding a substantial portion of the inner conductive line
13 component with a dielectric polymer layer; and
14 forming a co-axial outer conductive line component over the
15 dielectric polymer layer.

16
17 20. The method of claim 19 further comprising forming a
18 masking material trough which extends between exposed portions of the
19 terminal members, at least a portion of the inner conductive line
20 component being formed within the trough.

21. The method of claim 19, wherein the forming of the co-axial inner conductive line component comprises:

forming a masking material over the substrate;
 patterning the masking material to form a conductive line pattern which exposes at least some of the conductive terminal members; and
 electrically connecting exposed portions of the conductive terminal members through the conductive line pattern.

22. The method of claim 21, wherein the electrically connecting comprises electroplating conductive material at least within the conductive line pattern.

23. The method of claim 21, wherein the electrically connecting comprises electroless plating a conductive material at least within the conductive line pattern.

24. The method of claim 19, wherein the dielectric polymer layer comprises Parylene.

25. The method of claim 19, wherein the forming of the co-axial outer conductive line component comprises chemical vapor depositing a metal-comprising layer over the dielectric polymer layer.

1 26. The method of claim 19, wherein the forming of the co-
2 axial outer conductive line component comprises electroless plating the
3 line component over the dielectric polymer layer.

4
5 27. A method of forming a co-axial line comprising:
6 forming a pair of upstanding, spaced-apart terminal members over
7 a substrate;
8 forming photoresist over the terminal members;
9 forming a line pattern within the photoresist which exposes and
10 extends between the terminal members;
11 sputtering a first conductive layer of material over the co-axial
12 line pattern;
13 electroplating a second conductive material over the first
14 conductive layer;
15 forming a dielectric layer over the second conductive material
16 surrounding a substantial portion thereof; and
17 forming an outer conductive sheath of material over the dielectric
18 layer.

19
20 28. The method of claim 27, wherein the sputtering of the first
21 conductive layer comprises ionized magnetron sputtering of the first
22 conductive layer.

1 29. The method of claim 27, wherein the forming of the
2 dielectric layer comprises forming a polymer layer over the second
3 conductive material.

4
5 30. The method of claim 27 further comprising after the
6 electroplating of the second conductive material:

7 planarizing the second conductive material relative to the
8 photoresist; and

9 prior to the forming of the dielectric layer, removing the
10 photoresist from around the second conductive material.

11
12 31. A method of forming a co-axial line comprising:

13 forming a pair of upstanding, spaced-apart terminal members over
14 a substrate;

15 forming photoresist over the terminal members;

16 forming a line pattern within the photoresist which exposes and
17 extends between the terminal members;

18 electroless plating a conductive material over the co-axial line
19 pattern;

20 forming a dielectric layer over the conductive material; and

21 forming an outer conductive sheath of material over the dielectric
22 layer.

1 32. The method of claim 31, wherein the forming of the
2 dielectric layer comprises forming a polymer layer over the electroless-
3 plated conductive material.

4
5 33. The method of claim 31 further comprising after the
6 electroless plating of the conductive material:

7 planarizing the electroless-plated conductive material relative to the
8 photoresist; and

9 prior to the forming of the dielectric layer, removing the
10 photoresist from around the electroless-plated conductive material.

09887049.052101
TOT290.54028860

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

35. Integrated circuitry comprising:

- a semiconductive substrate having an outer surface;
- an inner conductive core spaced from and over the outer surface;
- a polymer dielectric layer surrounding a substantial portion of the inner conductive core; and
- an outer conductive sheath surrounding a substantial portion of the polymer dielectric layer.

36. Integrated circuitry comprising:

- a semiconductive substrate having an outer surface;
- a pair of spaced-apart terminal members disposed over the outer surface and extending elevationally away therefrom;
- an inner conductive core operably connected with and extending between the spaced-apart terminal members;
- a polymer dielectric layer over a substantial portion of the inner conductive core; and
- an outer conductive sheath surrounding a substantial portion of the polymer dielectric layer.

09887049.052101
TOT290.64028860

1 37. Integrated circuitry comprising:

2 a substrate having an outer surface;

3 a pair of upstanding, spaced-apart conductive terminal members
4 disposed over the substrate outer surface;

5 a copper-comprising layer of material operably connected with and
6 extending between the terminal members, the copper-comprising layer
7 having a thickness of between about 100 to 200 nanometers;

8 a conductive layer of material disposed over and operably
9 connected with the copper-comprising layer of material, the conductive
10 layer comprising conductive material selected from the group consisting
11 of copper, gold, nickel, cobalt, and iron;

12 a dielectric layer comprising Parylene disposed over the conductive
13 layer of material, the dielectric layer surrounding conductive layer
14 portions which extend between the terminal members; and

15 an outer conductive sheath of material disposed over the dielectric
16 layer and surrounding dielectric layer portions which extend between the
17 terminal members.
18
19
20
21
22
23
24